having been produced from cold air, and as if it were possible to manufacture CO-free steam-air ^gas. Here the amount of heat available for the combustion chamber is, notwithstanding the tremendous amount of hydrogen, smaller than with employment of pure air-gas, which for comparison is placed alongside it. The circumstances are given rise to by the high specific heat of steam 0-7482x1,700° = 1,272 calories per cubic metre, owing to which the amount of energy going to loss which is contained in the gases drawn off, is considerably increased.

Table L, on p. 121, shows the influence which constituents of the distillation gas exercise on the heat energy, which can be placed at disposal of the combustion chamber under the conditions given. In the first column, numbered 7, is represented the best average producer gas manufactured from a fuel in which 12 per cent, of carbon goes over into the gas as distillation gas; in the third column, numbered 9, is set out a gas from practical working, the fuel of which permitted of 16 per cent, carbon going over into the distillation gas. This gas has not been irreproachably made. Column numbered 8 shows how it should have appeared in case it had been actually made according to the theories developed under the headings " Distillation Gas" and "Producer Gas." In the last column the theoretical steam-air gas is set out for comparison.

Calculations yield as available in the combustion chamber—

	For correctly manufactured Gas.		For faultily mtinii-fuctured Ga.s.	
	Gals.	Column.	Gals.	Column.
Pure air-gas	2,261	6) {	—	----
Steam-air gas from cold air. Steam-air gas produced from air heated to 500°.	2,737 3,228	4 3) TABLE K I	2,077	5
Average producer gas .	3,444	7) (	__	—
Producer gas from coal with 16 per cent, of volatilisable carbon.	3,591	8 (> TABLE L I	2,727	9

One sees that gas manufactured from richly bituminous fuels can give far higher values than gas from pure C. Should,